

Nishi Sharma

nishisharmaanil@gmail.com | +91 8077394388 | Github: [nishisharma311](#) | LinkedIn: [nishisharmaanil](#)

EXPERIENCE

BORGWARNER IPEC | ASSOCIATE SOFTWARE ENGINEER

July 2023 – Present | Bengaluru, Karnataka

- Responsible for the development and testing of real-time Application Software for various inverter modules, focusing on high reliability, performance, in compliance with AUTOSAR and ISO 26262 functional safety standards.
- Contributed to process improvements and documentation that enabled the project to achieve ASPICE Level 2 compliance, ensuring structured software development and traceability
- Automated the process of MISRA C/C++ static code analysis, reducing manual effort and development time by 20%.
- Integrated factory test software with model-based designs for early-stage open-loop validation in simulated environments.
- Collaborated with CoC and CoE teams to support platform-level integration and testing of the Park Lock System.
- Hands on experience with test benches like Motor Sim, LV, HV and Mini Benches.
- Participated annually in Tech Day Events with cross-functional teams to foster innovation and collaboration; received Spark Award for paper presentation and contributions to the Variable Gate Drive Strength(VGR) feature.

MCCAIN INDIA | ELECTRICAL INTERN

May 2022 – July 2022 | Mehsana, Gujarat

- Worked on reactive and proactive maintenance strategies for reducing and optimizing preventive maintenance time.
- Worked on RCA of increased PM time and application of preventive strategies to prevent hazard.

PROJECTS

SMART BATTERY MONITORING SYSTEM | DEVELOPED SIMULINK MODEL FOR BATTERY STATE ESTIMATION

May 2022-May 2023| SVNIT, Surat| Link: [BMS](#)

- Implemented Simulink Model for Battery SOC and SOH estimation using different algorithms like Coulomb Counting and Kalman Filters.
- Designed and integrated the firmware that runs on Arduino Uno and sensors like wifi module, current and temperature sensor using UART serial communication.
- Worked on User friendly GUI using Thignspeak(IOT) that displays real-time battery data and charts in your mobile application.

UAV CONTROL SYSTEM | DESIGNED SIMULINK MODEL

Nov 2022 - Aug 2023| Drishti SVNIT, Surat| Link: [Github](#)

- Designed UAV control system on MATLAB Simulink from scratch using UAV Toolbox. Simulated the mathematical model of UAV and estimated the control system parameters using PID algorithm.

LINE FOLLOWER BOT | EMBEDDED C

Nov 2019| Drishti SVNIT, Surat

- Designed an Autonomous line following bot using infrared sensors and ATMEGA 32 microcontroller.

EDUCATION

SVNIT, SURAT

BTECH. ELECTRICAL ENGINEERING, WITH MINORS IN ECE

May 2023 | Surat, Gujarat

Cum. CGPA: 9.21 / 10.0

SKILLS

Languages:

Embedded C • C/C++ • Python

Model-Based Design:

MATLAB Simulink

Debugging Tools:

TRACE32 • Lauterbach • MS Visual Studio • ASTREE

Standards and Compliance

ISO 26262 • AUTOSAR • ASPICE • MISRA C/C++

Microcontrollers:

Infineon AURIX TC37xx • STM32 • Arduino (AVR/ARM)

Protocols:

CAN • SPI • I2C • UART

ALM Tools:

JIRA • Polarion

Others:

Git/Bitbucket • RTOS
CI/CD • Automation
Circuit designing/Proteus

COURSEWORK

- Data Structure and Algorithm, LeetCode
- The Ardrino Platform and C Programming, Coursera
- Introduction to the Internet of Things and Embedded Systems, Coursera
- Motor Control and Power Electronics

SOCIETIES

- Drishti, SVNIT
- DSC, NIT SURAT
- EES, NIT SURAT